2: Hockings E-4,5 (1962-1977) 1980
AW50 Badaga AW50

177 423 planters or to engage in new occupations so as to earn enough cash to maintain themselves and pay the revenue assessments on their land (Shortt & Ouchterlony, 1868, 64; Grigg, 1880, 325, 471, 480; Ranga, 1934, 11–14). Those made landless by the restrictions on [464] forest swidden cultivation and also the labour surplus of the immigrant and rapidly expanding population were obliged to work in the plantations for wages, which were primarily used for buying grain in the markets. By 1870 Badaga men were getting contracts as construction gangs, a few women were picking tea or coffee-beans and young boys could be seen breaking stones by the roadside.[10]

241 311 [423] [492] [407] [423] Early in this century most Badaga families still owned and cultivated land within two kilometres of their homes. This land was usually hilly and always unirrigated. There was relatively little terracing on the hill-slopes (Grigg, 1880, 470), and most tilling was still done with ploughs and oxen.[11] The best fields lay in the valley flats, not so much because of the proximity of stream water as because of the rich deposit of topsoil. Badagas had long recognized the differences in soils and terrain, both when choosing where to plant crops and when dividing up the patrimony. Soil distinctions were important to them, but distance from the home was even more significant. Land was therefore categorized by Badagas primarily as home-farm (within a half kilometre), outfield, or jungle clearings.[2] The first type got much of the cattle manure and all human refuse; more distant land received little manure and was often left fallow (Grigg, 1880, 319–320, quoting from a Revenue Board Report probably of 1863); jungle clearings were never manured and could lie fallow for several years. Weeding, like manuring, was mostly confined to the more valuable crops growing near the home.

311 [423] A majority of the cultivable land on the plateau has always belonged to the Badagas; in the mid-nineteenth century this amounted to 12,750 hectares, of which some 6,960 ha. were cultivated each year; but thirty years later 'the occupied area of the plateau has trebled itself... mainly due to the extension of cultivation by the Badaga villagers'. During the twentieth century virtually all of the land under subsistence crops (barley, millets and wheat) as well as plateau land growing market [177] vegetables and fruits was farmed by Badagas and Kotas. On the other hand a majority of the land devoted to tea, coffee and 127 cinchona was in British-owned plantations. Few reliable figures

2: Hockings E-4,5 (1962-1977) 1980
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1836; Metz, 1864, 6-7; Grigg, 1880, 456-458; Macleane, 1893, 403; Francis 1908, 203, 441.

3. Metz, 1864, 8-9; an anna was 1/16 rupee, worth just under one U.S. cent today.

4. Grigg, 1880, 288, quoting from a report of December 1827; yet Harkness 1832, 111, remarked that 'The poorer Burghers form the only class of labourers now to be procured on the hills . . .'

5. B.E.M.S., 1848, no. 18, 93; 1860, no. 20, 59; Shortt & Ouchterlony, 1868, 64; Grigg, 1880, 510-511; Watt, 1889, 465; Francis, 1908, 171, 178; Tanna, 1970, 17, 37. Tea was first grown here experimentally in 1835 from Chinese seeds and coffee in 1838; Macleane, 1893, 403.

6. Baikie, 1857, 38, 92; Markham, 1862, 367; Metz, 1864, 99, 152-154; Ouchterlony, 1848, 2, 5, 28; Shortt & Ouchterlony, 1868, 71; Grigg, 1880, 465-467. The more important items in the list are identified botanically above, p. 146, n. 7.

7. Transferred back to Coimbatore District from Malabar in 1860; Grigg, 1880, 309, 322-323; Macleane, 1893, 216; Thurston, 1909, vol. I, 78-79.

8. Grigg, 1880, 316, 321. On the shortcomings of their agriculture in this period, see Shortt & Ouchterlony, 1868, 31-36; Grigg, 1880, 480; 'Geofry', 1881, 132-135.

9. Grigg, 1880, 325. The Settlement of land holdings took place in 1864-1884; Grigg, 1880, 321-323.

10. B.E.M.S., 1858, no. 18, 93; 1860, no. 20, 59; McPherson, 1870, 15, 18, 21; Grigg, 1880, 34, 219-220. Tea-pickers were usually lowland labourers, for Badaga women were then afraid of being near jungle even when in gangs.

11. A few ploughs are still in use near the Si:gu:ru Pass; other villages preserve old ploughs to venerate at an annual ceremony; but in general ploughs went out of use fifty years ago; Ranga, 1934, 8.

12. Francis, 1908, 165-166; Ranga, 1934, 11-14. The lands are called respectively *ha:lihola, ka:ḍuhola* and *so:lahola;* see Plate 1.

13. Grigg, 1880, 13, citing Ouchterlony, 1848, 14; Shortt & Ouchterlony, 1868, 14. It may be illuminating to cite an example of one administrative 'village'—Ke:ti Village—which reflects how much of the plateau land was formerly owned by Badagas. The available figures come from the 1881 land settlement records and show how 3235 hectares of this particular 'village' (actually a grouping of nearly two dozen villages) were distributed in the last years before the widespread adoption there of a cash economy:

Badaga farming lands	2,083 ha.
Badaga grazing ground	204 ha.
Toda grazing lands	51 ha.
Village sites (mainly Badaga)	90 ha.
Government forest areas	123 ha.
Anglo-Indian orphanage and school	307 ha.
Plantations (mainly British-owned)	175 ha.
Government cinchona plantation	2 ha.
Available for sale	200 ha.

(Source: Benson, 1881, 188-189)

From these data it is clear that this area, by no means an atypical one, was farmed largely by Badagas. (The 200 h.a. 'for sale' is somewhat misleading; it

243 placed in small heaps, and burned when dry. Plows used in soil prep-
(407) aration were of a general type presently used in southern India. Some
(175) doubtlessly had a metal strip attached to the share, but Ouchterlony (1848: 31) stated that the share was "almost invariably a piece of pointed wood, of a tough description, hardened in the fire, and not shod with iron, or any other metal." Plowing was performed by two
(492) methods. In the first, a lead team of yoked cattle drawing a plow was followed by five or six similar teams drawing plows. After plows scraped a single furrow, paralleled furrows were formed by forcing the
(492) cattle to pull plows in lines paralleling the first. When the other method was used, a single team of yoked cattle pulled a plow over a field as many as five times. During each replowing, furrows were
(462) crossed. After the men had finished the plowing, women and children
(857) with small hoes worked over the soil, broke up clods, removed weeds, and piled them in small heaps. After the weeds were burned, the ashes were scattered over the ground. Cattle manure from cattle pens was mixed with community trash, loaded into baskets, and carried to fields. After being broadcast, the fertilizer was worked into the soil through another plowing or with hoes. Men broadcast seeds, or planted seeds, plants, and seed potatoes (later 1800s) in rows. Sown seeds were covered by a last plowing or light hoeing. Women and children usually weeded the fields two or more times. To speed this process up, rows
(592) of weeders sometimes worked cooperatively. Harvesting was performed
(412) by all family members, and sickles were the main harvesting implements. Bundles of straw with grain or baskets loaded with grain heads were carried as head loads to threshing floors. Temporary threshing floors

243 were constructed in the fields, but there were also well cowdunged permanent threshing floors within communities. To thresh out grain, cattle were muzzled, lined up, tied together and to a central post, (462) and then driven around in circles over straw and grain. Women, however, used threshing sticks to thresh out grain on courtyards fronting (251) houses. Sun-dried grain was stored away in large conical baskets plastered inside and out with cowdung, but finger millet was often kept in pits.

241 • 407 In 1908 plows were still being used, but by 1930 they were no longer in general use (Francis 1908: 166; Carl 1930: 32). The abandonment of plows resulted from the need for deeper soil turnover and ridging in potato cultivation. This was touched upon by Robertson (1875: 26), who stated that "as the native plough cannot ridge the land, the preparation of the soil, except the mere stirring and loosening, is all done by manual labor, and the cost of putting in the crop is much higher than it need be were a mouldboard plough used; . . . ." Three Swedish moldboard plows were sent to the Nilgiris in 1882-83, and a Badaga purchased one after a plowing exhibit at Ketti (Madras Department of Revenue Settlement and Agriculture 1884: 19; M.D. of R.S. and A. 1886: 6). However, Badagas never adopted moldboard plows. If they had done so, it is likely that plows would still be used. In 1908 244 412 potato plots were prepared through use of digging forks, introduced by the English, and hoes (Francis 1908: 167-168). During World War I, when potato production was greatly increased, the borrowed English digging fork rapidly replaced the plow. There is a distinct possibility that varied hoe-forks now used by Badagas were locally developed in that

243 fields. A single plow, usually pulled by two buffaloes, may be drawn (220) back and forth over a field. At irregular intervals of days or even (492) weeks the field will be replowed until it has been plowed four to six times, with former plow lines being crossed at each replowing. If several buffalo teams are available, plowing may be speeded by teams (312) working simultaneously in a single file. Dikes to retain rainwater must also be rebuilt or repaired with the aid of hoes (Figure 15), and at least the final plowing is performed in fields well soaked by (401) rainwater backed up behind the dikes. Drawn harrows aid in the leveling and mixing of soil. Puddlers are lastly used to flatten and smooth surfaces about to receive rice seeds. Prior to broadcasting, the seeds are usually mixed in a cowdung wash and left sitting for several days in a small heap covered with leaves. Broadcast seeds stick in mud and there take root. Plants may remain untouched until harvesting, but most seeds take root in selected nursery fields from which plants are later pulled up and transplanted.

(221) Because seeds are planted on nursery fields from April into June, the transplanting period extends from June into August. It is during this period that most fields are plowed, harrowed, and puddled (Plate XII, E). In addition to supplemental dung fertilizer deposited on the fields, green leaves are trampled into the mud by the feet of (462) humans and livestock. Field preparation is men's work, but only women transplant young rice plants. The young plants, pulled up after approximately 40 days, are tied into bundles. By twisting off plant tops, each bundle top is flattened. Bundles carried to prepared fields are broken up individually as a field is planted. Two or three plants